ABSTRACT

A method of using Raman imaging microscopy to evaluate drug actions in living cells is disclosed. Specifically the invention describes the methods of using Raman imaging microscopy to detect drug uptake, distribution, binding, and metabolism in a single cell, and to study drug pharmacokinetics at the cellular level. The method involves measuring the Raman image of both the drug and the cell. Control images and post-treatment images of the cell were studied. Ratio images were calculated and the requisite information was obtained from a study of the intensity of the bright areas in the ratio images.